Application No. 09/818,706
Amendment dated December 04, 2003
Reply to Office Action dated June 05, 2003

1. (Currently Amended) A method for recovering fluorescent material from faulty glass bodies ~~(1)~~ of discharge lamps, said glass body ~~(1)~~ having a glass envelope and a coating of fluorescent material including binding material on the surface of the glass envelope, said method comprising the steps of breaking the faulty glass bodies ~~(1)~~ in a crusher; separating a remaining fraction forming a reusable waste from the broken scrap including glass particles and fluorescent material particles by sieving ~~(15)~~; treating the remaining fraction by heat for removing the binding material from the fluorescent material; separating the fluorescent material from the surface of the glass particles in a liquid by washing ~~(19)~~; and obtaining a reusable fluorescent material from the liquid suspension by means of at least one sedimentary deposition ~~(21)~~.

2. (Currently Amended) The method of claim 1 in which the crusher has press rollers ~~(23, 25)~~ and the distance between the press rollers ~~(23, 25)~~ is equal to ~~0, 6D – 0, 9D~~0.6D – 0.9D, where D is the diameter of the glass envelope.

3. (Currently Amended) The method of claim 1 in which the crusher has press rollers ~~(23, 25)~~ and the distance between the press rollers ~~(23, 25)~~ is adjustable.

4. (Original) The method of claim 1 in which the mesh size of the sieve used for separating the fraction forming a reusable waste is between 3.0 and 3.5 millimeters.

5. (Currently Amended) The method of claim 1 in which the fraction remaining after sieving ~~(15)~~ is treated by heat at a temperature of 500-520 °C.

6. (Currently Amended) The method of claim 1 in which the fluorescent material is separated from the surface of the glass particles by ultrasonic washing ~~(19)~~.

7. (Currently Amended) The method of claim 1 in which obtaining the reusable fluorescent material from the liquid suspension comprises the steps of drawing off the liquid after the first sedimentary deposition ~~(21)~~; and filling up the liquid, depositing, drawing off the liquid repeatedly for removing dirt remaining on the surface of the fluorescent material.

8. (Original) The method of claim 1 in which the liquid used for separating the fluorescent material from the surface of the glass particles is water.

9. (Currently Amended) A method for recovering fluorescent material from faulty glass bodies ~~(1)~~ of discharge lamps, said glass body ~~(1)~~ having a glass envelope and a coating ~~(9)~~ of fluorescent material on the surface of the glass envelope, said method comprising the steps of breaking the faulty glass bodies ~~(1)~~ in a crusher; removing all metallic component parts if present in the glass bodies ~~(1)~~ by means of electromagnetic separation ~~(13)~~; separating a remaining fraction forming a reusable waste from the broken scrap including glass particles and fluorescent material particles by sieving ~~(15)~~; separating the fluorescent material from the surface of the glass particles in a liquid by washing ~~(19)~~; and obtaining a reusable fluorescent material from the liquid suspension by means of at least one sedimentary deposition ~~(21)~~.

10. (New) A method for recovering fluorescent material from faulty glass bodies of discharge lamps, said glass body having a glass envelope and a coating of fluorescent material on the surface of the glass envelope and sealed ends, said method comprising the steps of breaking the faulty glass bodies and ends in a crusher; removing all metallic component parts if present in the glass bodies by means of electromagnetic separation; separating a remaining fraction forming a reusable waste from the broken scrap including glass particles and fluorescent material particles by sieving; separating the fluorescent material from the surface of the glass particles in a liquid by washing; and obtaining a reusable fluorescent material from the liquid suspension by means of at least one sedimentary deposition.

11. (New) The method of claim 10 in which the crusher has press rollers and the distance between the press rollers is equal to 0.6D – 0.9D, where D is the diameter of the glass envelope.

12. (New) The method of claim 10 in which the crusher has press rollers and the distance between the press rollers is adjustable.

13. (New) The method of claim 10 in which the mesh size of the sieve used for separating the fraction forming a reusable waste is between 3.0 and 3.5 millimeters.

14. (New) The method of claim 10 in which the fraction remaining after sieving is treated by heat at a temperature of 500-520 °C.

15. (New) The method of claim 10 in which the fluorescent material is separated from the surface of the glass particles by ultrasonic washing.

16. (New) The method of claim 10 in which obtaining the reusable fluorescent material from the liquid suspension comprises the steps of drawing off the liquid after the first sedimentary deposition; and filling up the liquid, depositing, drawing off the liquid repeatedly for removing dirt remaining on the surface of the fluorescent material.

17. (New) The method of claim 10 in which the liquid used for separating the fluorescent material from the surface of the glass particles is water.